

WM-FX421/FX423/FX425

SERVICE MANUAL



Photo: FX425

US Model

WM-FX421/FX423/FX425

Canadian Model

WM-FX421/FX423

AEP Model

WM-FX421/FX423/FX425

UK Model

E Model

WM-FX423/FX425

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.

"DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	WM-FX28
Tape Transport Mechanism Type	MF-WMFX305-43

SPECIFICATIONS

Radio Frequency

- FM : 65 – 74 MHz, 87.5 – 108 MHz (0.05 MHz step)(East European Model)
: 87.5 – 108 MHz (0.1 MHz step)(US, Canadian Model)
: 87.5 – 108 MHz (0.05 MHz)(AEP, UK, Italian, E Model)
AM : 530 – 1,710 kHz (10 kHz step)(US, Canadian Model)
: 531 – 1,602 kHz (9 kHz step)
(AEP, UK, Italian, East European, E Model)

Power Requirements

- 3V DC Batteries R6 (AA) x 2
- External DC 3 V power sources

Battery Life

(approximate hours when using the batteries specified below)

Battery	Playback	Radio
Sony Alkaline LR6 (SG)	13 hours	20 hours
Sony R6P (SR)	4 hours	12 hours

Dimensions

116.5 x 86.3 x 34.6 mm (4 5/8 x 3 1/2 x 1 3/8 in.)(w/h/d)
incl. projecting parts

Mass

210g (7.5 oz) incl. batteries

Supplied Accessories

- Stereo headphones (1)
- Belt clip (1)

Design and specifications are subject to change without notice.

Note:

Use only the recommended AC-E30HG AC power adaptor (not supplied). Do not use any other AC power adaptor.



Polarity of the plug

RADIO CASSETTE PLAYER
SONY®



使用時は添付資料も参照のこと
Refer to the additional documents.

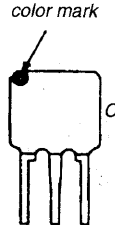
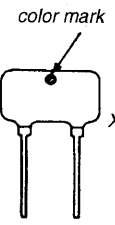
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HOW TO CHANGED THE CERAMIC FILTERS

This model is used two ceramic filters of CF2, X2. You must used same type of color marked ceramic filters in order to meet same specifications.

Therefore, the ceramic filter must changed two pieces together since it's supply two pieces in one package as a spare parts.

	color mark	Center Frequency
	red	10.70MHz
	blue	10.67MHz
	orange	10.73MHz
	black	10.64MHz
	white	10.76MHz

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SECTION 1 GENERAL

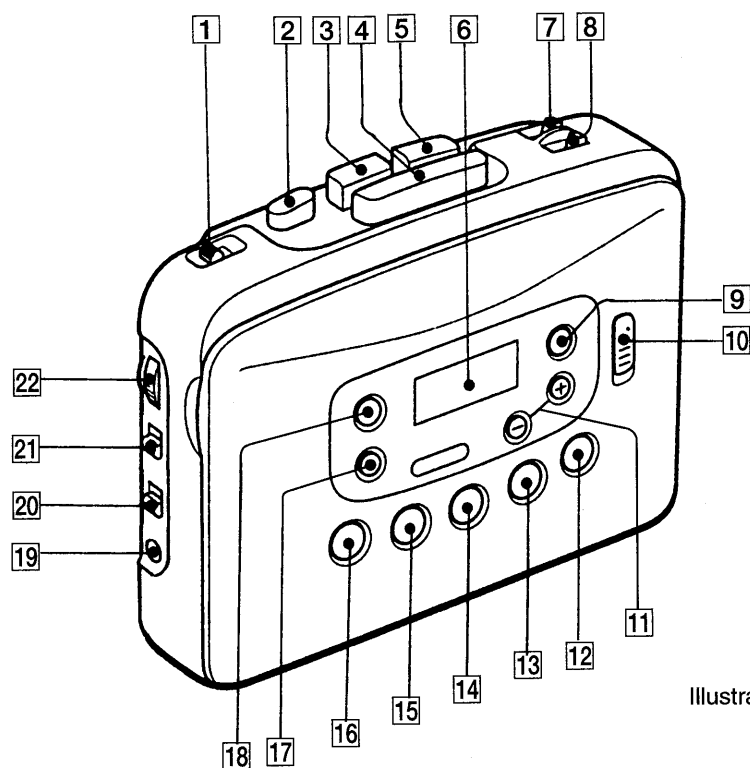


Illustration: FX425 MODEL

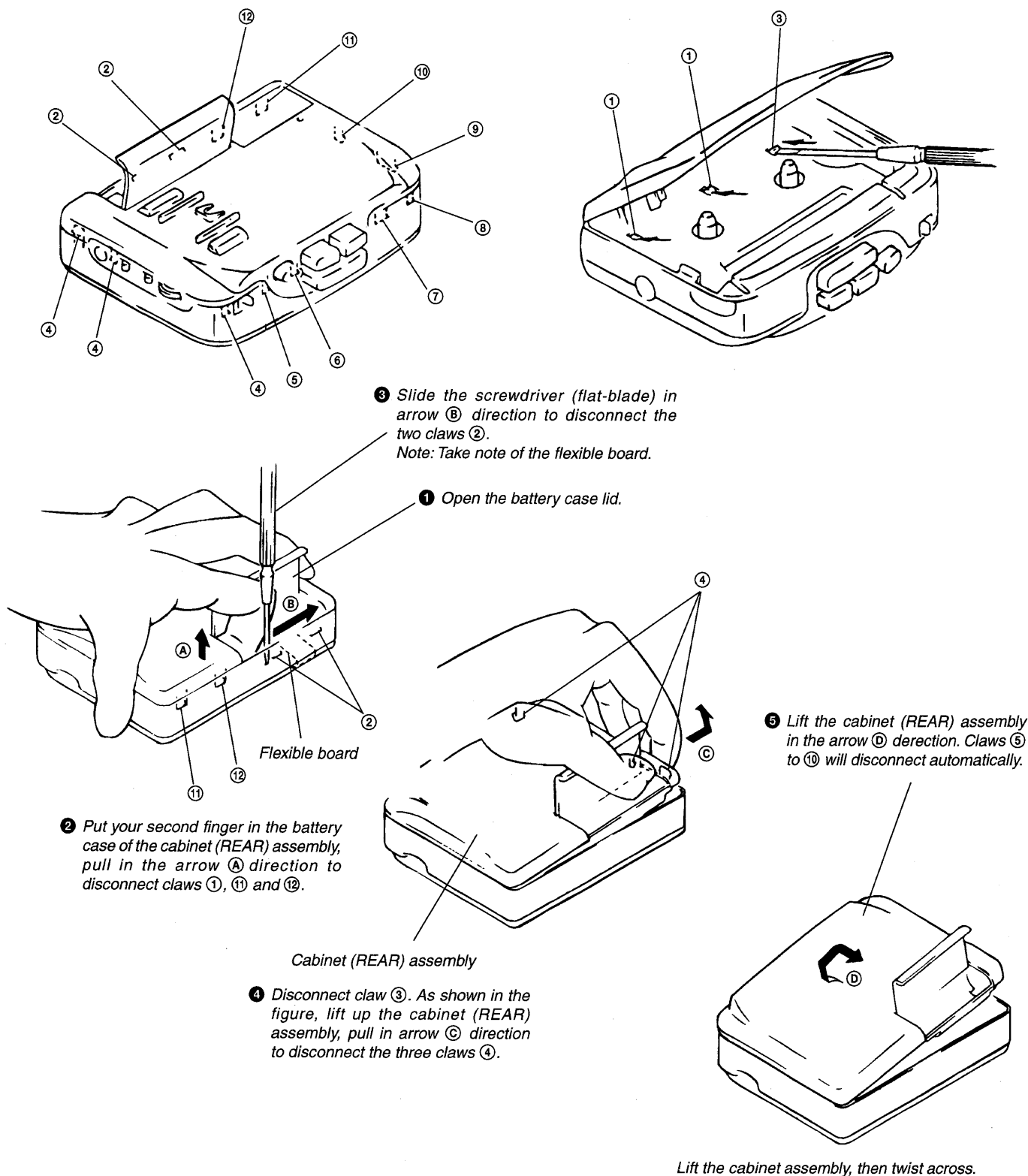
- | | |
|---|---|
| 1 TAPE (Tape playback equalizer) selector | FM/AM PRESET (preset number) buttons |
| 2 ■ (stop) button | 12 5 button |
| 3 ◀◀ (fast-forward) button | 13 4 button |
| 4 ▶▶ PLAY (playback) button | 14 3 button |
| 5 ▶▶ (rewind) button | 15 2 button |
| 6 Display window | 16 1 button |
| 7 MODE (playback mode) selector | 17 BAND (band select) button |
| 8 ◀▶ DIR (tape transport direction change) selector | 18 RADIO ON/OFF button |
| 9 ENTER button | 19 ☎ (headphones) jack |
| 10 MEGA BASS switch (FX423/FX425 model) | 20 AVLS (Automatic Volume Limiter System) selector |
| 11 TUNING -/+ , MINUTE/HOUR buttons | 21 FM MODE selector (US, Canadian model)/
FM SENS selector (Except US, Canadian model)/
DOLBY NR (playback) switch (FX425 model)
(Dolby Noise Reduction) |
| | 22 VOL ▲ (volume) control |

SECTION 2 DISASSEMBLY

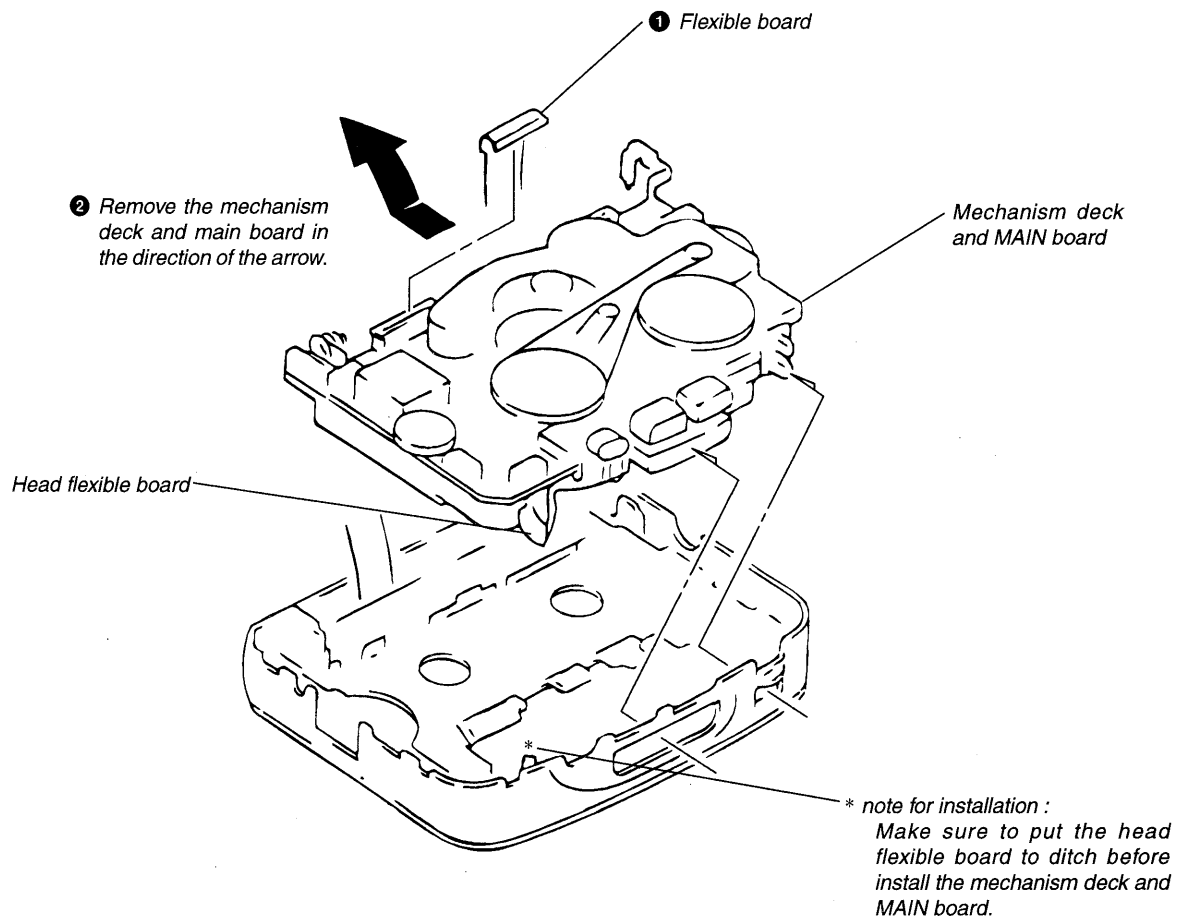
Note: Follow the disassembly procedure in the numerical order given.

2-1. CABINET (REAR) ASSEMBLY

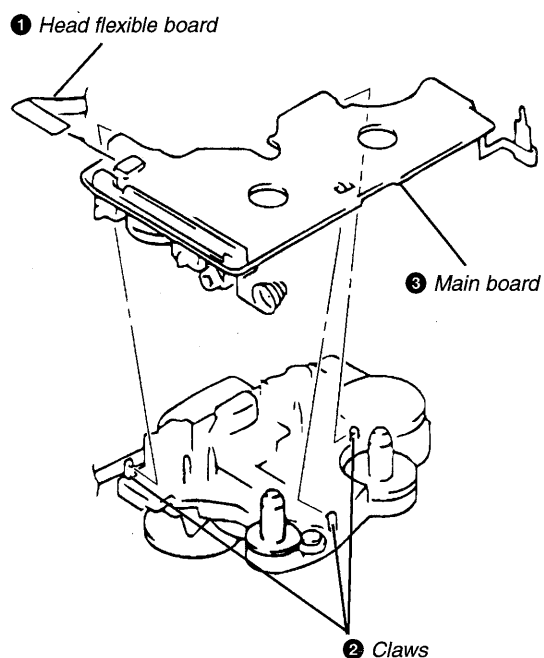
- The cabinet (REAR) assembly has numerous claws.
- When removing it, check the positions of these claws as shown below.



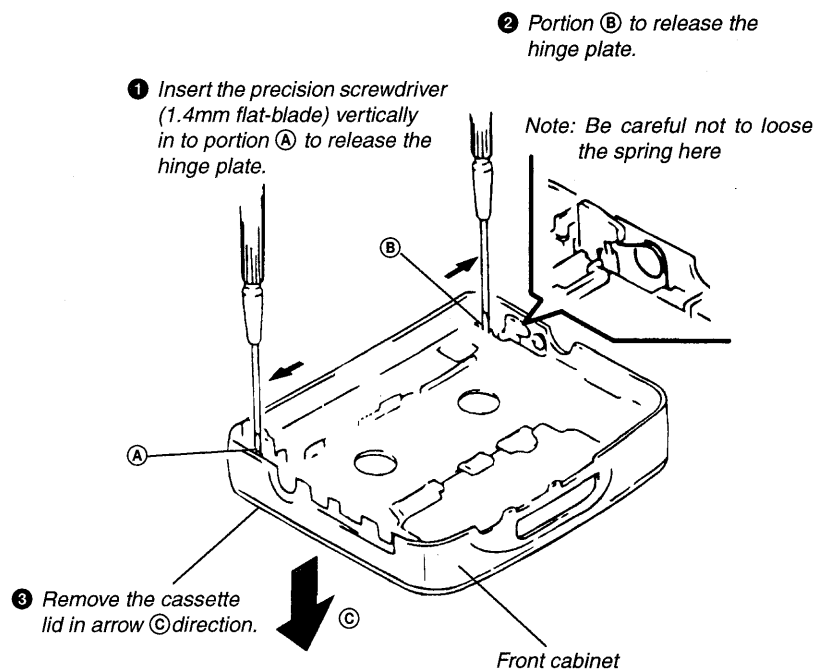
2-2. MECHANISM DECK AND MAIN BOARD



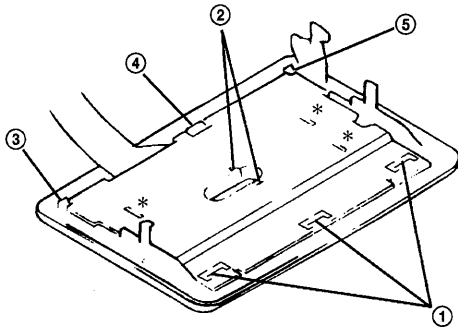
2-3. MAIN BOARD



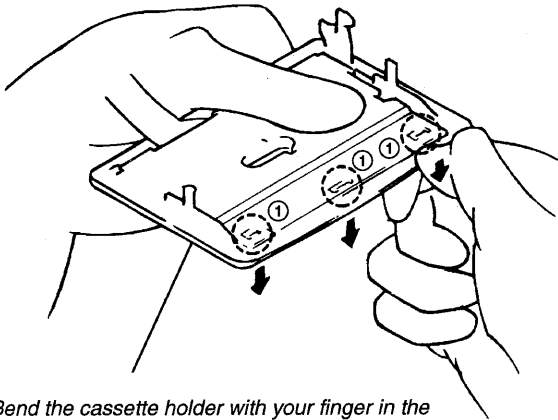
2-4. CASSETTE LID



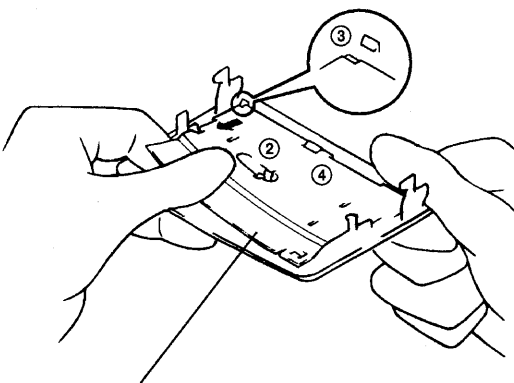
2-5. DISPLAY BOARD



Note: The *claws will disconnect automatically when this procedure is performed.

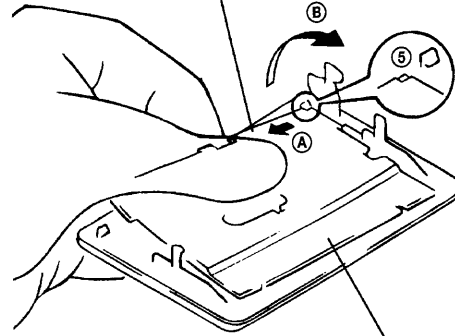


- ① Bend the cassette holder with your finger in the arrow direction. Disconnect the three claws ①.



- ② Put your second finger below the holder cover and disconnect the two claws ②.
- ③ Pull the holder cover in the arrow direction and remove claw ③, claw ④ will be disconnected automatically when claw ③ is disconnected.

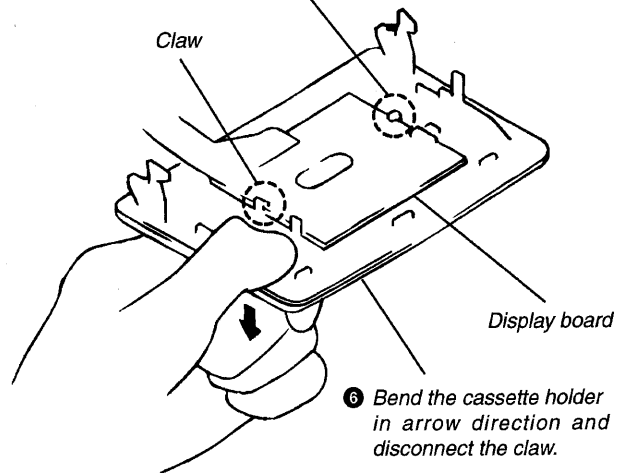
- ④ As shown in the figure, hold the holder cover, pull the holder cover in the arrow A direction, and disconnect claw ⑤.



- ⑤ Disconnect the holder cover in arrow B direction.



Note: When removing the display board, take this claw breaks easily.

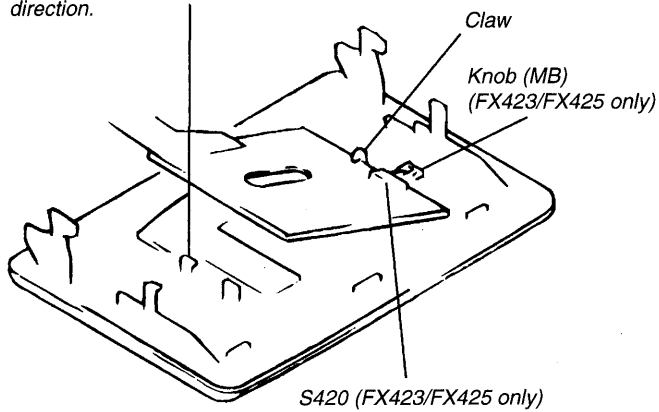


- ⑥ Bend the cassette holder in arrow direction and disconnect the claw.

2-6. NOTE FOR INSTALLATION

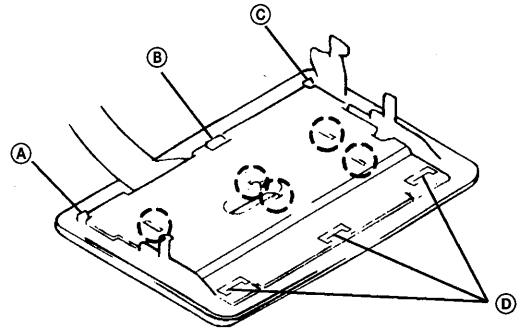
• DISPLAY BOARD

Engage the display board with the claw and align S420 with the knob (MB), then push the display board in the arrow direction.



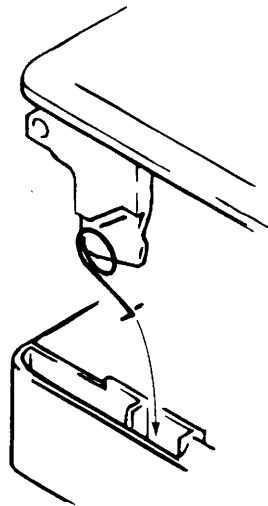
• HOLDER COVER

Insert the claws (A), (B) and (C) before hand, set the remaining five claws after setting the three claws of (D).



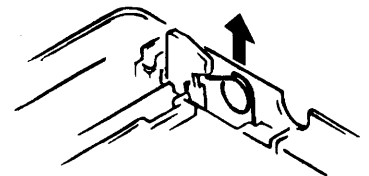
• TORSION SPRING

① Attach the torsion spring as shown in the figure.



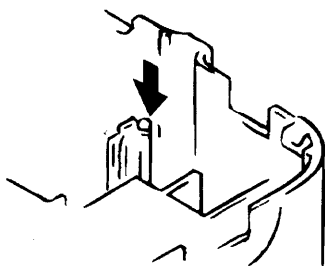
② Insert the torsion spring in the hole as shown in the figure.

③ Lift the torsion spring in the arrow direction and hook it properly.



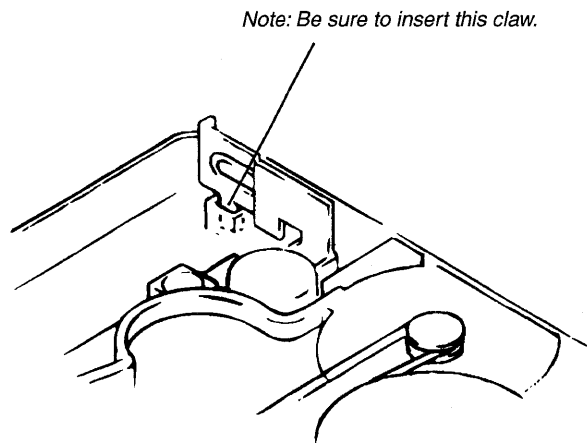
• MAIN BOARD

When mounting the main board, insert the head flexible board in the space indicated by the arrow.



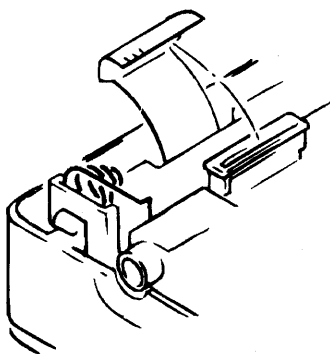
• BATTERY TERMINAL

Attach the battery (+) as shown in the figure.



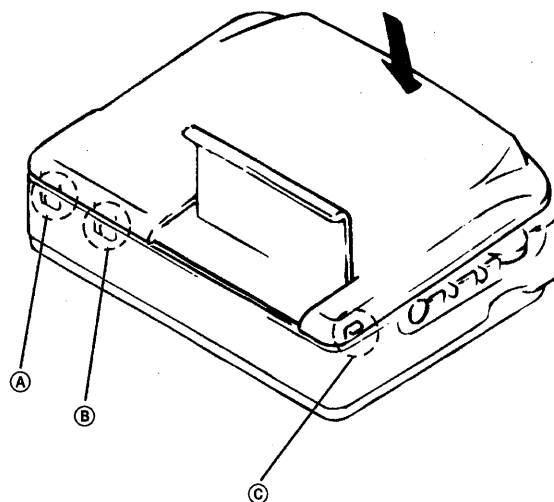
• TUNER FLEXIBLE BOARD

Attach the tuner flexible board as shown in the figure.



• CABINET (REAR) ASSEMBLY

After pushing claws (A) to (C) and locking them. Push the cabinet (REAR) assembly in the arrow direction, and lock the order claws.



SECTION 3 ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

Precaution

1. Clean the following parts with a denatured-alcohol-moistened swab :

playback head	pinch roller
capstan	rubber belts
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. The adjustments should be performed with the rated power supply voltage (2.5 V) unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	20-42 g • cm (0.28-0.58 oz • inch)
FWD Back Tension		less than 2 g • cm (less than 0.03 oz • inch)
FF, REW	CQ-201B	more than 60 g • cm (more than 0.83 oz • inch)

Tape Pulling Force Measurement

Mode	Torque meter	Meter reading
FWD	CQ-403A	more than 40g (more than 1.4 oz)

3-2. ELECTRICAL ADJUSTMENTS

Precaution

- Supplied voltage : 2.5V
- Switch and control position
 - TAPE switch : NORM
 - MODE switch : ST...Except US/ Canadian
 - FM SENS switch : DX...US/Canadian
 - VOLUME CONTROL : maximum
 - MEGA BASS switch : NORM...FX425, OFF...FX423
 - AVLS switch : NORM

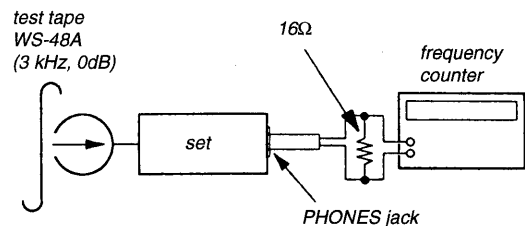
TEST TAPE

Type	Signal	Used for
WS-48A	3kHz, 0dB	Tape Speed Adjustment

TAPE SECTION

Tape speed adjustment

Procedure:

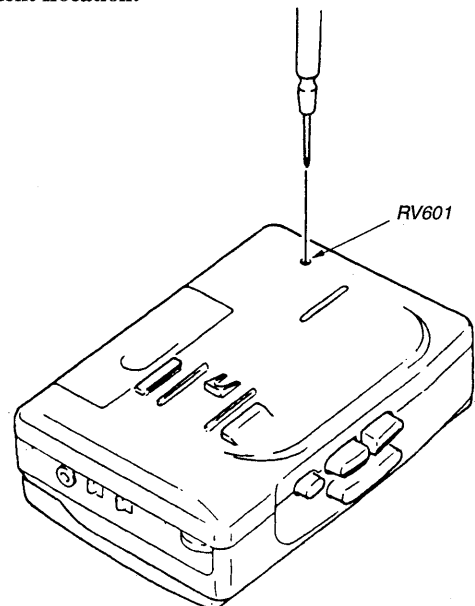


Play back WS-48A (tape center portion) in FWD mode.

Adjust the RV601 so that the frequency counter reads 3,000Hz $\pm$ 15Hz.

Frequency difference between the beginning and the end of the tape should be within $\pm$ 1.0%.

Adjustment Location:



TUNER SECTION

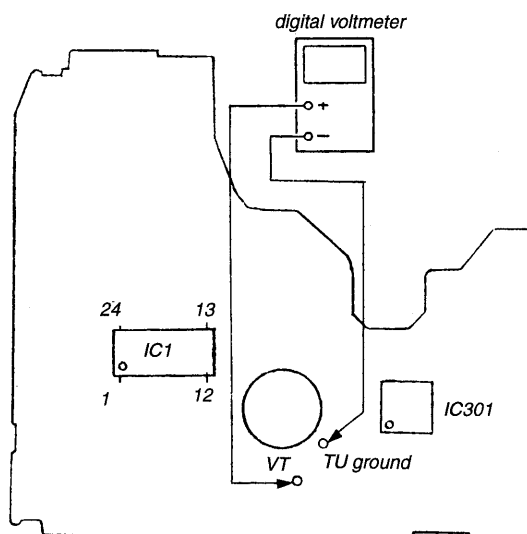
FM SECTION

Setting :

FUNCTION switch : RADIO

BAND switch : FM

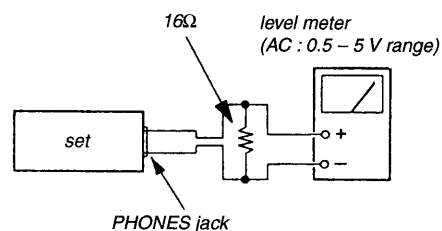
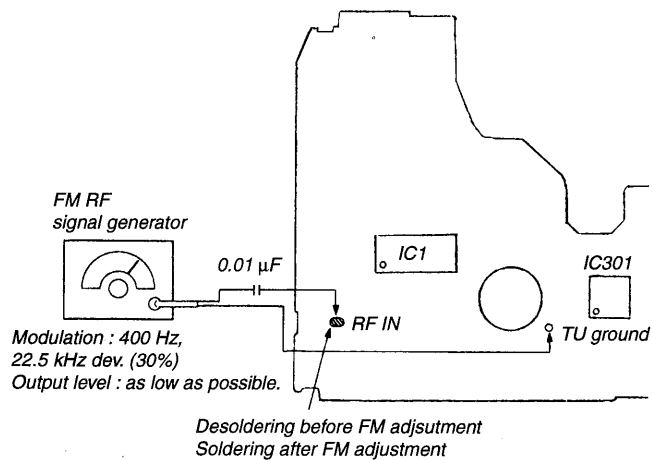
FM TUNING VOLTAGE ADJUSTMENT



FM TUNING VOLTAGE ADJUSTMENT	
Adjust for a $2.4 (1.8) \pm 0.1$ Vdc reading on digital voltmeter	
L3	
87.5 (65.0) MHz	

() : East European model

FM TRACKING ADJUSTMENT

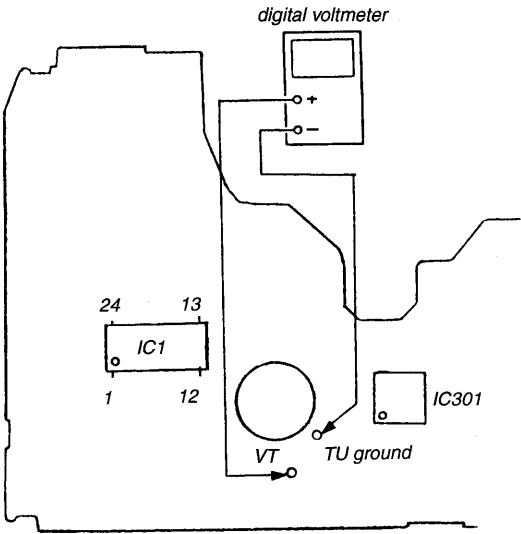


FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L2	
108 MHz	

AM SECTION

setting:
FUNCTION switch : RADIO
BAND switch : AM

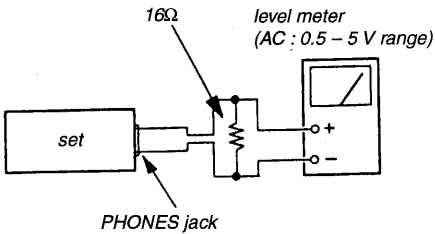
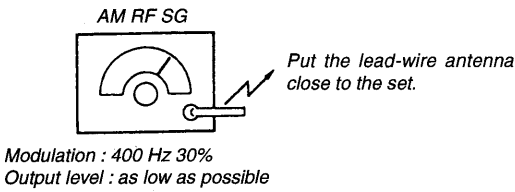
AM TUNING VOLTAGE ADJSUTMENT



AM TUNING VOLTAGE ADJUSTMENT
Adjust for a 1.4 ± 0.1 Vdc reading on digital voltmeter
L4
530 (531) kHz

() : Except US, Canadian model

AM IF ADJUSTMENT, AM TRACKING ADJUSTMENT



*Repeat the procedures in each adjsutment several times, and the tracking adjustment should be finally done by the trimmer capacitros.

AM IF ADJUSTMENT
Adjust for a maximum reading on level meter
T1
1000 (999) kHz

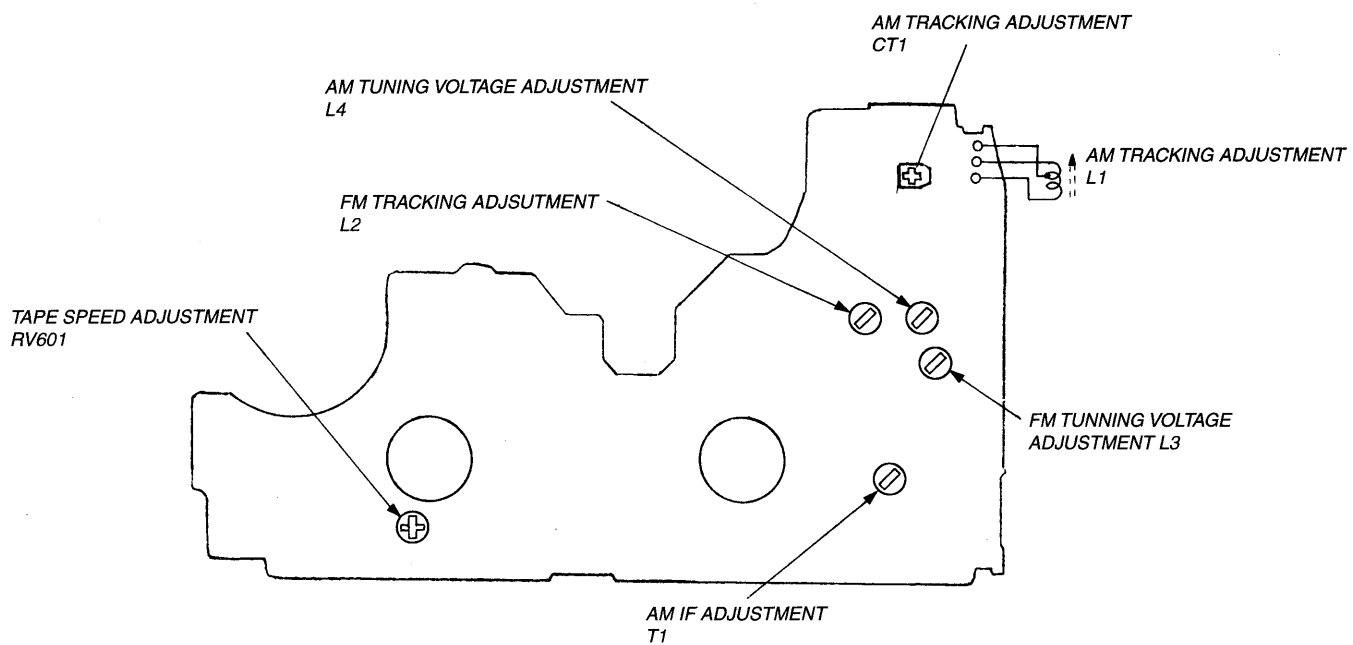
() : Except US, Canadian model

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L1 (BAR ANTENNA)	CT1
620 (621) kHz	1400 (1395) kHz

() : Except US, Canadian model

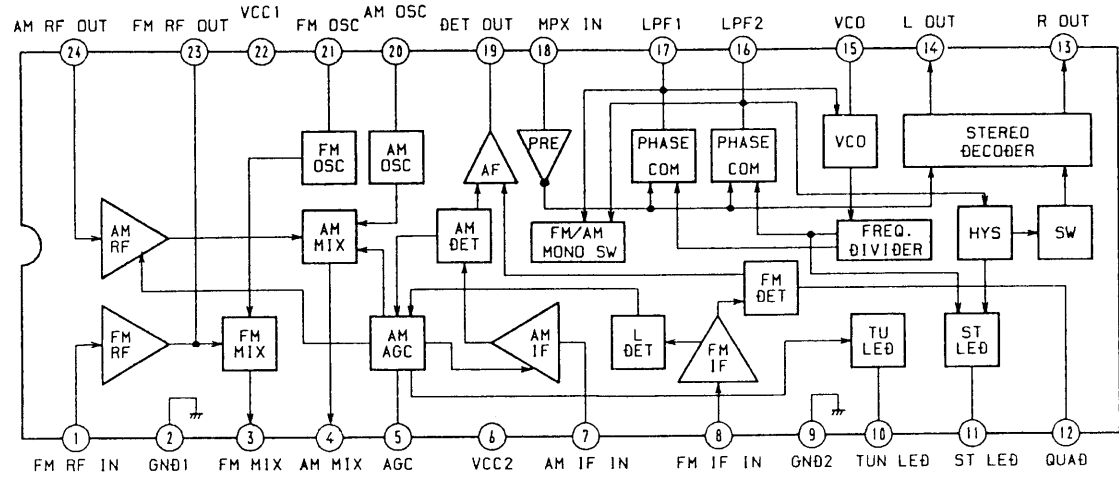
Adjustment Part Location Diagram :

[MAIN BOARD]

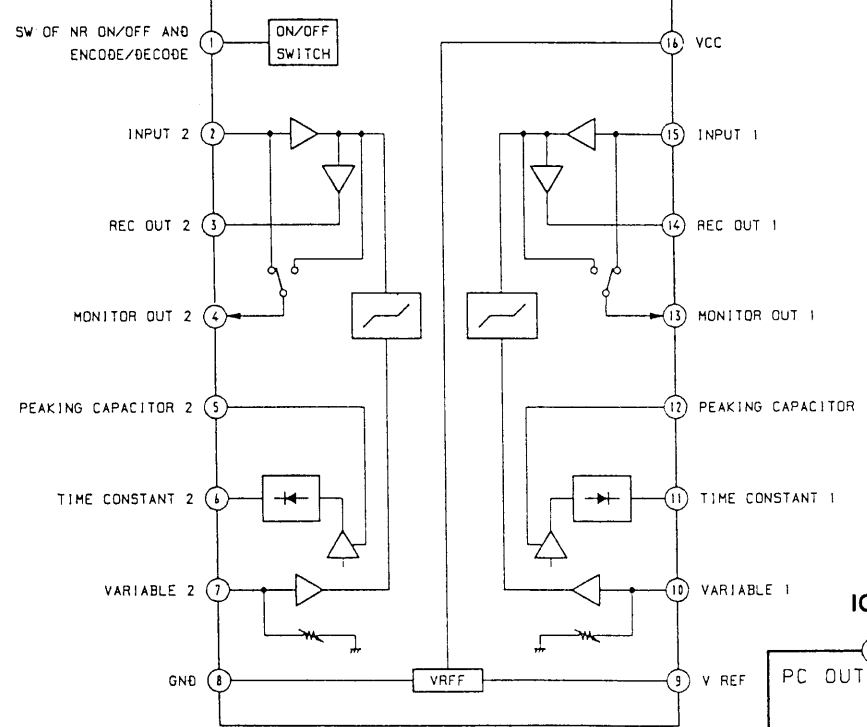


• IC BLOCK DIAGRAMS

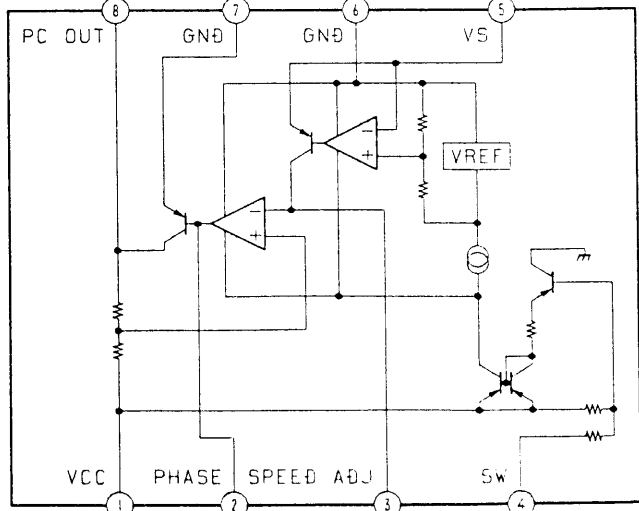
IC1 TA8122AF



IC351 NJM2063AM-T1



IC601 MM1038CFF-T1



Note:

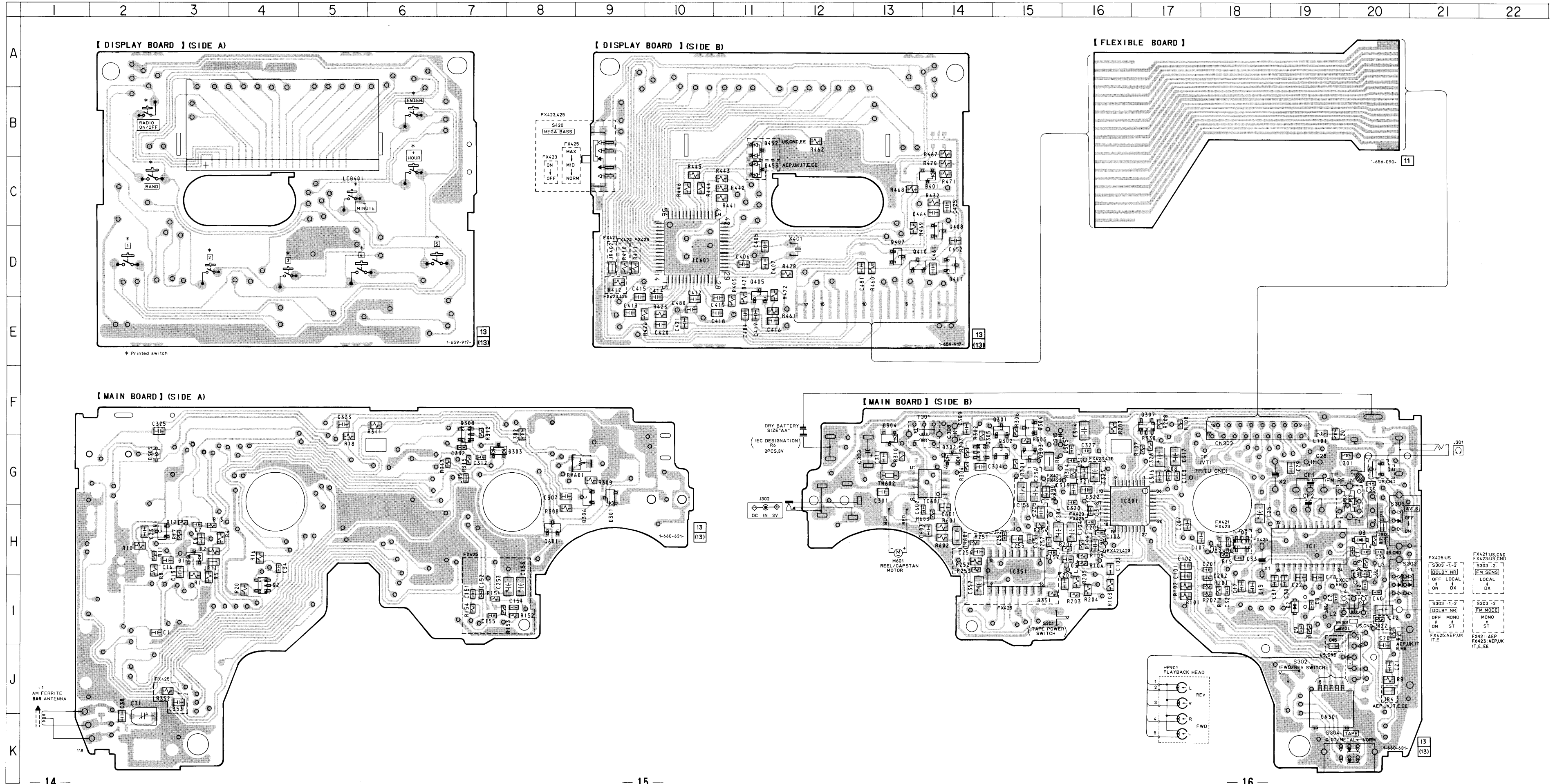
- : parts extracted from the component side.
 - : parts extracted from the conductor side.
 - : Through hole.
 - △ : Internal component.
 - ▨ : Pattern from the side which enable seeing. (The other layer's patterns are not indicated.)
- Abbreviation
CND: Canadian model.
IT : Italian model.
EE : East European model.

• Semiconductor Location

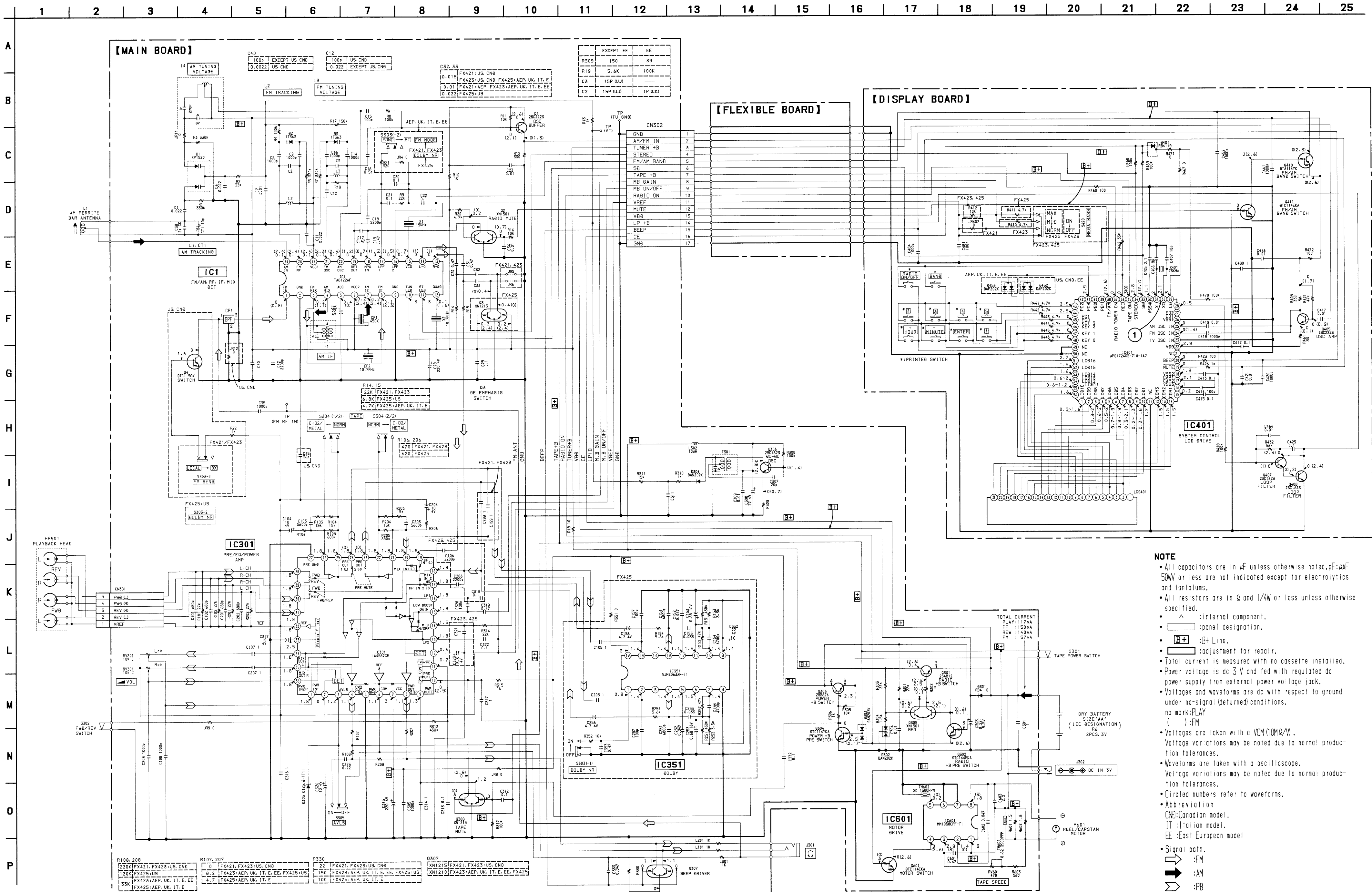
Ref. No.	Location
D1	H-3
D2	I-19
D3	H-20
D301	G-9
D302	G-14
D303	G-7
D304	G-13
D305	G-2
D401	C-14
D452	B-11
D453	C-11
IC1	H-19
IC301	G-16
IC351	H-15
IC401	D-10
IC601	G-14
Q1	H-3
Q2	I-4
Q3	H-18
Q4	G-20
Q301	F-15
Q302	G-15
Q303	G-15
Q304	F-15
Q305	G-14
Q306	G-9
Q307	F-17
Q308	F-7
Q405	D-11
Q407	D-13
Q408	D-14
Q410	D-13
Q411	D-14
Q601	H-8

SECTION 4
DIAGRAMS

4-1. PRINTED WIRING BOARD



4-2. SCHEMATIC DIAGRAM



4-3. IC PIN FUNCTION

• IC401 TUNER CONTROLLER/LCD DRIVE (μ PD1724GB-710-1A7)

Pin No.	Pin Name	I/O	Function
1 to 10	LCD10 to LCD 1	O	LCD segment signal output pin
11	NC	—	Not used
12 to 14	COM3 to COM1	O	LCD common signal output pin
15	VSS3	—	Pins connecting capacitors for doubler circuits generating the LCD drive voltage
16	CAP2	—	
17	CAP1	—	
18	VSS2	—	
19	MUTE	O	Generates 1.12 kHz pulses when using as a VDP (Variable Duty Port)
20	BEEP	O	BEEP signal output terminal ("H": BEEP)
21	NC	—	Not used
22	VDD	—	The internal reset circuit functions when supplied with 0V to 1.5V
23	TV OSC IN	I	Partial oscillation frequency input pin (direct dividing method) (HIGH IMP when CE is low) (Not used)
24	FM OSC IN	I	Partial oscillation frequency input pin (pulse swallow method)
25	AM OSC IN	I	(PULL DOWN when CE is low)
26	VSS1	—	Ground
27	E01	O	Not used
28	E02	O	When the fequency obtained by frequency dividing the partial oscillation frequency is higher than the reference frequency: HIGH output. When Lower: LOW output. When the same: HIGH-IMP.
29	CE	I	The internal reset circuit functions when LOW becomes HIGH
30	XO	O	Connected to the liquid crystal oscillator
31	XI	I	Oscillates 75 kHz liquid crystals
32	VSS4	—	Connected to the regulator circuit capacitor
33	SD	I	No broadcasting station: HIGH output. With: LOW output
34	STEREO	I	Stereo level input ("L": Light on)
35	TAPE ON	I	Tape signal input ("H": TAPE)
36	REC	O	Initialize
37	RADIO POWER ON	O	Radio power on
38	FM/AM	O	Outputs HIGH potential only during AM reception
39	PB1	O	Become LOW potential when TV channels 1 to 3 are received (Not used)
40	PB0	O	Become HIGH potential when TV channel 4 to 12 are received (Not used)
41	PC3	O	Timing signal output for key matrix
42	PC2	O	Not used
43, 44	P0, P1	O	Timing signal output for key matrix
45 to 48	KEY 3 to KEY 0	I	Key input
49, 50	NC	—	Not used
51 to 56	LCD 16 to LCD 11	O	LCD segment signal output pin

Abbreviation

LCD: Liquid Crystal Display

CE: Chip Enable

IMP: Impedance

SECTION 5 EXPLODED VIEWS

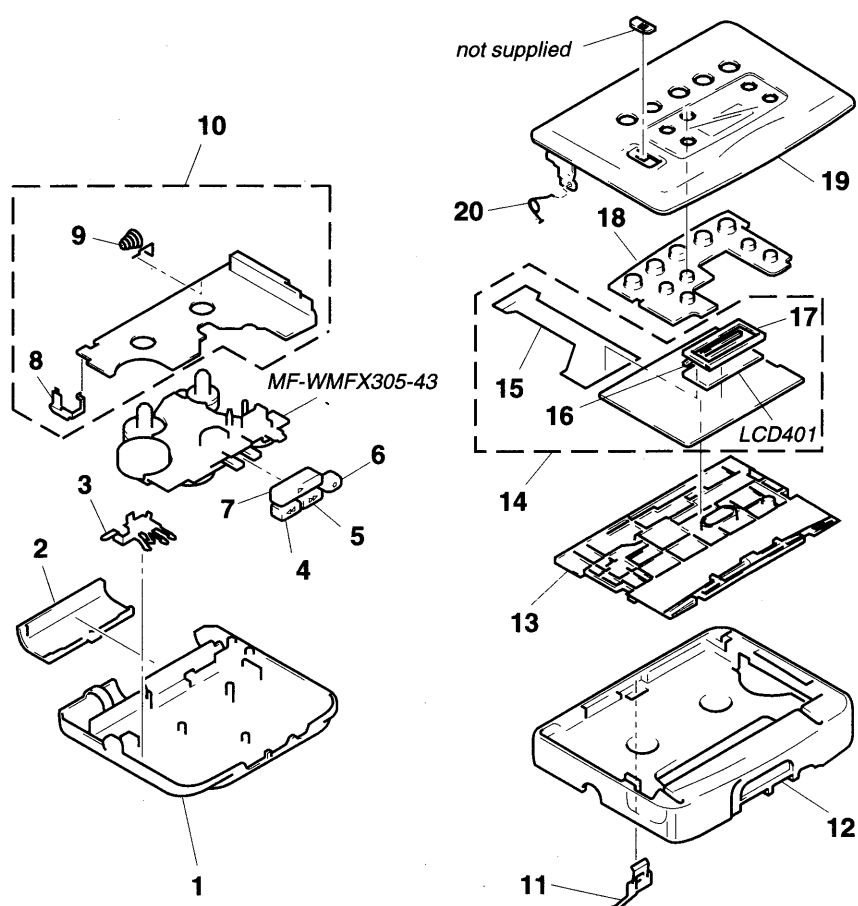
NOTE:

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts Example:
 KNOB, BALANCE (WHITE)...(RED)

↑
Parts color

↑
Cabinet's color
- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
 CND : Canadian model
 IT : Italian model
 EE : East European model

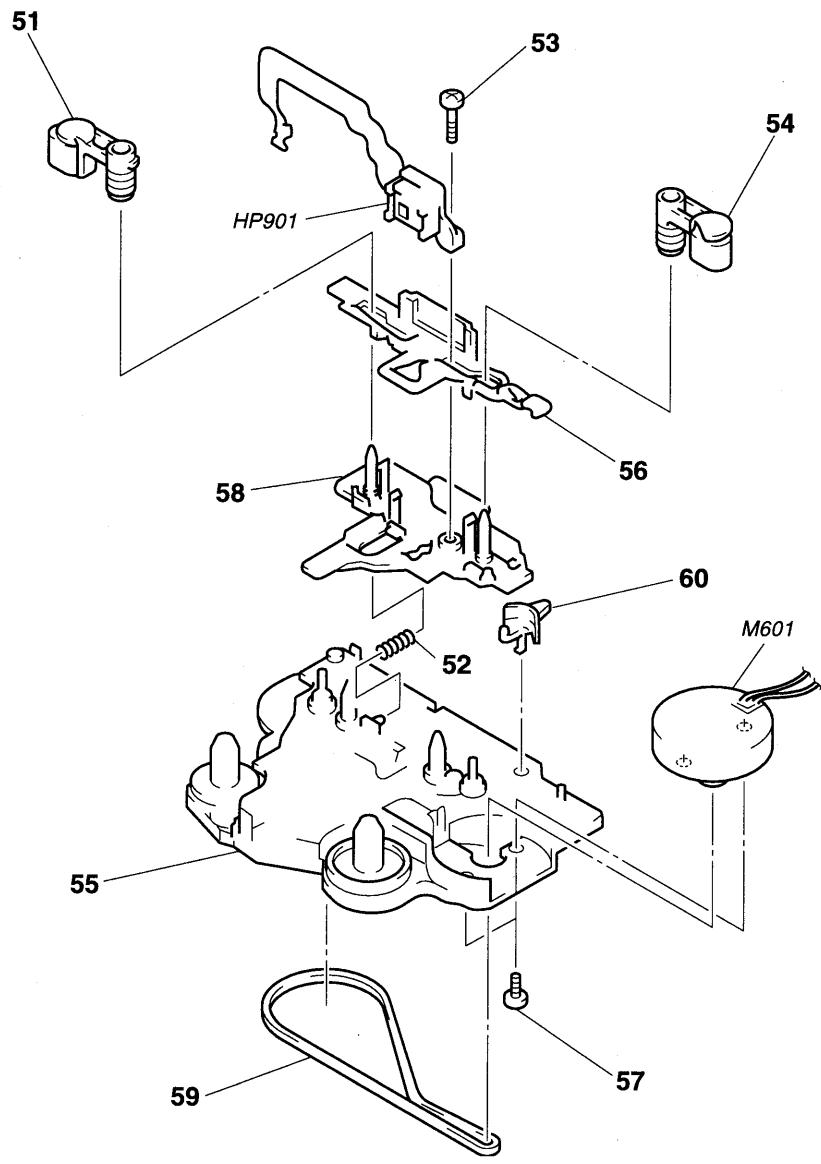
5-1. CABINET AND BOARD SECTION



Ref. No.	Part No.	Description	Remark
1	3-922-623-11	CABINET (REAR)(51)	
2	3-910-764-21	LID, BATTERY CASE	
3	3-910-896-01	GROUND, MOTOR	
4	3-910-540-11	BUTTON (REW) (FX421/FX423)	
4	3-910-917-21	BUTTON (REW) (FX425)	
5	3-910-539-11	BUTTON (FF) (FX421/FX423)	
5	3-910-916-21	BUTTON (FF) (FX425)	
6	3-910-541-11	BUTTON (STOP) (FX421/FX423)	
6	3-910-915-21	BUTTON (STOP) (FX425)	
7	3-910-538-01	BUTTON (PLAY) (FX421/FX423)	
7	3-910-918-21	BUTTON (PLAY) (FX425)	
8	3-922-066-01	TERMINAL (+), BATTERY	
9	3-922-629-01	TERMINAL (-), BATTERY	
10	A-3016-688-A	MAIN BOARD, COMPLETE (FX425:US)	
10	A-3016-693-A	MAIN BOARD, COMPLETE (FX423:US,CND)	
10	A-3016-697-A	MAIN BOARD, COMPLETE (FX423:AEP,UK,E,IT)	
10	A-3016-706-A	MAIN BOARD, COMPLETE (FX425:AEP,UK,E,IT)	
10	A-3016-767-A	MAIN BOARD, COMPLETE (FX421:US,CND)	
10	A-3016-774-A	MAIN BOARD, COMPLETE (FX423:EE)	
10	A-3016-847-A	MAIN BOARD, COMPLETE (FX421:AEP)	
11	3-364-675-01	SPRING (CASSETTE)	
12	3-933-077-01	CABINET (FRONT)(51)(FX421:US,CND)	
12	3-933-077-11	CABINET (FRONT)(51)(FX423:US,CND)	
12	3-933-077-21	CABINET (FRONT)(51) (FX423:AEP,UK,IT,EE/FX421:AEP)	
12	3-933-077-31	CABINET (FRONT)(51)(FX425:US)	
12	3-933-077-41	CABINET (FRONT)(51)(FX425:AEP,UK,E,IT)	
12	3-933-077-51	CABINET (FRONT)(51)(FX423:E)	

Ref. No.	Part No.	Description	Remark
13	3-922-622-01	COVER (51), HOLDER (FX423/FX425)	
13	3-922-635-01	COVER (50), HOLDER (FX421)	
14	A-3016-765-A	DISPLAY BOARD, COMPLETE (FX425:US)	
14	A-3016-766-A	DISPLAY BOARD, COMPLETE (FX425:AEP,UK,E,IT)	
14	A-3016-768-A	DISPLAY BOARD, COMPLETE (FX421:US,CND)	
14	A-3016-769-A	DISPLAY BOARD, COMPLETE (FX421:AEP)	
14	A-3016-772-A	DISPLAY BOARD, COMPLETE (FX423:US,CND)	
14	A-3016-773-A	DISPLAY BOARD, COMPLETE (FX423:AEP,UK,E,IT)	
14	A-3016-775-A	DISPLAY BOARD, COMPLETE (FX423:EE)	
15	1-656-090-11	FLEXIBLE BOARD	
* 16	1-537-870-11	CONNECTOR, RUBBER	
* 17	3-922-067-01	HOLDER, LCD	
18	3-922-621-01	BUTTON (51), RUBBER (FX423)	
18	3-922-621-12	BUTTON (51), RUBBER (FX425)	
18	3-922-634-01	BUTTON (51), RUBBER (FX421)	
19	X-3372-040-1	HOLDER SUB ASSY, CASSETTE (BLACK)(FX423)	
19	X-3372-045-1	HOLDER SUB ASSY, CASSETTE (BLACK)(FX425)	
19	X-3372-041-1	HOLDER SUB ASSY, CASSETTE (SILVER) (FX423:AEP,UK,E,IT,EE)	
19	X-3372-042-1	HOLDER SUB ASSY, CASSETTE (BLUE) (FX423:AEP,UK,E,IT,EE)	
19	X-3372-043-1	HOLDER SUB ASSY, CASSETTE (GREEN) (FX423:AEP,UK,E,IT,EE)	
19	X-3372-044-1	HOLDER SUB ASSY, CASSETTE (GOLD) (FX423:AEP,UK,E,IT,EE)	
19	3-922-633-21	HOLDER (50), CASSETTE (BLACK)(FX421)	
20	3-922-628-01	SPRING, TORSION	
LCD401	1-801-176-11	DISPLAY PANEL, LIQUID CRYSTAL	

5-2. MECHANISM SECTION (MF-WMFX305-43)



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
51	X-3367-902-1	ARM (N) ASSY, PINCH		57	3-352-758-21	SCREW (M1.7), TOOTHED LOCK	
52	3-364-328-01	SPRING, COMPRESSION		58	3-910-644-01	LEVER (PR), PLAY	
53	3-910-635-01	SCREW		59	3-354-868-11	BELT	
54	X-3367-903-1	PINCH (R) ASSY		60	3-909-698-01	LEVER D SELECTION	
55	X-3368-730-1	CHASSIS ASSY		HP901	1-543-705-11	HEAD, MAGNETIC (PLAYBACK)	
56	3-910-643-01	ARM (NR)		M601	1-698-353-11	MOTOR, DC (REEL/CAPSTAN)	

SECTION 6 ELECTRICAL PARTS LIST

DISPLAY

Note:

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F : nonflammable

- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA...: μ PA..., uPB...: μ PB...,
uPC...: μ PC..., uPD...: μ PD...
- CAPACITORS
uF : μ F
- COILS
uH : μ H
- Abbreviation
CND : Canadian model
IT : Italian model
EE : East European model

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
	A-3016-768-A	DISPLAY BOARD, COMPLETE (FX421:US,CND) *****				< DIODE >	
	A-3016-769-A	DISPLAY BOARD, COMPLETE (FX421:AEP) *****		D401	8-719-975-40	DIODE RB411D	
	A-3016-772-A	DISPLAY BOARD, COMPLETE (FX423:US,CND) *****		D452	8-719-914-44	DIODE DAP202K (US,CND,EE)	
	A-3016-773-A	DISPLAY BOARD, COMPLETE (FX423:AEP,UK,IT,E) *****		D453	8-719-914-44	DIODE DAP202K (EXCEPT US,CND)	
	A-3016-775-A	DISPLAY BOARD, COMPLETE (FX423:EE) *****				< IC >	
	A-3016-765-A	DISPLAY BOARD, COMPLETE (FX425:US) *****		IC401	8-759-385-80	IC uPD1724GB-710-1A7	
	A-3016-766-A	DISPLAY BOARD, COMPLETE (FX425:AEP,UK,IT,E) *****				< JUMPER RESISTOR >	
*	1-656-090-11	FLEXIBLE BOARD		JR402	1-216-295-91	CONDUCTOR, CHIP(2012) (FX421)	
*	1-537-870-11	CONNECTOR, RUBBER				< LIQUID CRYSTAL DISPLAY >	
*	3-922-067-01	HOLDER, LCD		LCD401	1-801-176-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< CAPACITOR >				< TRANSISTOR >	
C405	1-163-038-91	CERAMIC CHIP 0.1uF	25V	Q405	8-729-102-07	TRANSISTOR 2SC2223-F13	
C406	1-163-091-00	CERAMIC CHIP 8PF	5% 50V	Q407	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
C407	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	Q408	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
C412	1-163-038-91	CERAMIC CHIP 0.1uF	25V	Q410	8-729-901-46	TRANSISTOR DTA114YK	
C413	1-163-038-91	CERAMIC CHIP 0.1uF	25V	Q411	8-729-900-53	TRANSISTOR DTC114EK	
C414	1-163-117-00	CERAMIC CHIP 100PF	5% 50V			< RESISTOR >	
C415	1-163-038-91	CERAMIC CHIP 0.1uF	25V	R405	1-216-037-00	METAL CHIP 330	5% 1/10W
C416	1-163-031-11	CERAMIC CHIP 0.01uF	50V	R410	1-216-065-00	METAL CHIP 4.7K	5% 1/10W
C417	1-164-232-11	CERAMIC CHIP 0.01uF	50V				(FX423)
C418	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V	R411	1-216-065-00	METAL CHIP 4.7K	5% 1/10W
C419	1-164-232-11	CERAMIC CHIP 0.01uF	50V				(FX425)
C420	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V	R412	1-216-073-00	METAL CHIP 10K	5% 1/10W
C421	1-164-232-11	CERAMIC CHIP 0.01uF	50V				(FX423,FX425)
C425	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V	R421	1-216-089-91	METAL GLAZE 47K	5% 1/10W
C452	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V				
C461	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V	R423	1-216-025-91	METAL GLAZE 100	5% 1/10W
C464	1-164-232-11	CERAMIC CHIP 0.01uF	50V	R426	1-216-049-91	METAL GLAZE 1K	5% 1/10W
C480	1-164-346-11	CERAMIC CHIP 1uF	16V	R428	1-216-097-91	METAL GLAZE 100K	5% 1/10W
C481	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	R432	1-216-091-00	METAL CHIP 56K	5% 1/10W
C484	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V	R441	1-216-065-00	METAL CHIP 4.7K	5% 1/10W
				R442	1-216-065-00	METAL CHIP 4.7K	5% 1/10W
				R443	1-216-065-00	METAL CHIP 4.7K	5% 1/10W
				R444	1-216-065-00	METAL CHIP 4.7K	5% 1/10W
				R445	1-216-065-00	METAL CHIP 4.7K	5% 1/10W
				R446	1-216-065-00	METAL CHIP 4.7K	5% 1/10W
				R460	1-216-025-91	METAL GLAZE 100	5% 1/10W

DISPLAY

MAIN

Ref. No.	Part No.	Description			Remark
R461	1-216-013-00	METAL CHIP	33	5%	1/10W
R462	1-216-085-00	METAL CHIP	33K	5%	1/10W
R467	1-216-295-91	CONDUCTOR, CHIP (2012)			
R468	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R469	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R470	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R471	1-216-295-91	CONDUCTOR, CHIP (2012)			
R472	1-216-025-91	METAL GLAZE	100	5%	1/10W
< SWITCH >					
S420	1-692-605-11	SWITCH, SLIDE (MEGA BASS)(FX423,FX425)			
< VIBRATOR >					
X401	1-760-666-11	VIBRATOR, CRYSTAL (75KHz)			

A-3016-688-A	MAIN BOARD, COMPLETE (FX425:US)				

A-3016-693-A	MAIN BOARD, COMPLETE (FX423:US,CND)				

A-3016-697-A	MAIN BOARD, COMPLETE (FX423:AEP,UK,IT,E)				

A-3016-706-A	MAIN BOARD, COMPLETE (FX425:AEP,UK,IT,E)				

A-3016-767-A	MAIN BOARD, COMPLETE (FX421:US,CND)				

A-3016-774-A	MAIN BOARD, COMPLETE (FX423:EE)				

A-3016-847-A	MAIN BOARD, COMPLETE (FX421:AEP)				

3-922-066-01	TERMINAL (+), BATTERY				
3-922-629-01	TERMINAL (-), BATTERY				
< CAPACITOR >					
C1	1-163-033-91	CERAMIC CHIP	0.022uF		50V
C2	1-164-118-11	CERAMIC CHIP	15PF	5%	50V
(EXCEPT EE)					
C2	1-162-905-11	CERAMIC CHIP	1PF	0.25PF	50V
(EE)					
C3	1-164-118-11	CERAMIC CHIP	15PF	5%	50V
(EXCEPT EE)					
C6	1-163-033-91	CERAMIC CHIP	0.022uF		50V
C7	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C8	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C9	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C11	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C12	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
(US,CND)					

Ref. No.	Part No.	Description	Remark
C12	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V
(EXCEPT US,CND)			
C14	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C15	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C16	1-163-082-00	CERAMIC CHIP 0.5PF 0.25PF	50V
C17	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C18	1-164-161-11	CERAMIC CHIP 0.0022uF 10%	100V
C19	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C20	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C21	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C22	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C23	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C25	1-104-847-11	TANTAL. CHIP 22uF 20%	4V
C28	1-124-434-00	ELECT 220uF 20%	4V
C29	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C30	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C31	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C32	1-164-245-11	CERAMIC CHIP 0.015uF 10%	25V
(FX421:US,CND,FX423:US,CND,FX425:AEP,UK,IT,E)			
C32	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
(FX421:AEP,FX423:AEP,UK,IT,E,EE)			
C32	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V
(FX425:US)			
C33	1-164-245-11	CERAMIC CHIP 0.015uF 10%	25V
(FX421:US,CND,FX423:US,CND,FX425:AEP,UK,IT,E)			
C33	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
(FX421:AEP,FX423:AEP,UK,IT,E,EE)			
C33	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V
(FX425:US)			
C34	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C35	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C36	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C38	1-163-085-00	CERAMIC CHIP 2PF	50V
C40	1-162-953-11	CERAMIC CHIP 100pF 5%	50V
(EXCEPT US,CND)			
C40	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V
(US,CND)			
C42	1-163-213-00	CERAMIC CHIP 0.0022uF 5%	50V
C45	1-164-149-11	CERAMIC CHIP 36PF 5%	50V
(US,CND)			
C101	1-163-007-11	CERAMIC CHIP 680PF 10%	50V
C102	1-163-007-11	CERAMIC CHIP 680PF 10%	50V
C103	1-163-018-00	CERAMIC CHIP 0.0056uF 5%	50V
C104	1-135-201-11	TANTALUM CHIP 10uF 20%	4V
C105	1-164-234-11	CERAMIC CHIP 1uF	10V
(FX425)			
C106	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V
(FX423,FX425)			
C107	1-164-234-11	CERAMIC CHIP 1uF	10V
C108	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C151	1-162-969-11	CERAMIC CHIP 0.0068uF 10%	25V
(FX425)			
C152	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V
(FX425)			

MAIN

Ref. No.	Part No.	Description	Remark
C153	1-165-321-11	CERAMIC CHIP 0.68uF 10%	16V (FX425)
C154	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V (FX425)
C155	1-164-677-11	CERAMIC CHIP 0.033uF 10%	16V (FX425)
C156	1-135-151-21	TANTALUM CHIP 4.7uF 20%	4V (FX425)
C157	1-162-953-11	CERAMIC CHIP 100PF 5%	50V (FX425)
C199	1-164-234-11	CERAMIC CHIP 1uF	10V (FX421,FX423)
C201	1-162-963-11	CERAMIC CHIP 680PF 10%	50V
C202	1-162-963-11	CERAMIC CHIP 680PF 10%	50V
C203	1-163-018-00	CERAMIC CHIP 0.0056uF 5%	50V
C204	1-135-201-11	TANTALUM CHIP 10uF 20%	4V
C205	1-164-234-11	CERAMIC CHIP 1uF	10V (FX425)
C206	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V (FX423,FX425)
C207	1-164-234-11	CERAMIC CHIP 1uF	10V
C208	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C251	1-162-969-11	CERAMIC CHIP 0.0068uF 10%	25V (FX425)
C252	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V (FX425)
C253	1-165-321-11	CERAMIC CHIP 0.68uF 10%	16V (FX425)
C254	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V (FX425)
C255	1-163-989-11	CERAMIC CHIP 0.033uF 10%	25V (FX425)
C256	1-135-151-21	TANTALUM CHIP 4.7uF 20%	4V (FX425)
C257	1-162-953-11	CERAMIC CHIP 100PF 5%	50V (FX425)
C299	1-164-234-11	CERAMIC CHIP 1uF	10V (FX421,FX423)
C301	1-164-234-11	CERAMIC CHIP 1uF	10V
C303	1-125-624-21	DOUBLE LAYERS 0.22F	5.5V
C304	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C305	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C307	1-163-100-00	CERAMIC CHIP 20PF 5%	50V
C308	1-124-430-00	ELECT 22uF 20%	4V
C309	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C311	1-164-234-11	CERAMIC CHIP 1uF	10V
C312	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C313	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C314	1-162-638-11	CERAMIC CHIP 1uF	16V
C315	1-124-434-00	ELECT 220uF 20%	4V
C316	1-164-234-11	CERAMIC CHIP 1uF	10V
C317	1-135-201-11	TANTALUM CHIP 10uF 20%	4V
C318	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V (FX423,FX425)

Ref. No.	Part No.	Description	Remark
C319	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C320	1-162-953-11	CERAMIC CHIP 100PF 5%	50V
C321	1-164-234-11	CERAMIC CHIP 1uF	10V (FX423,FX425)
C322	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C323	1-135-180-21	TANTALUM CHIP 3.3uF 10%	10V (FX423,FX425)
C325	1-164-222-11	CERAMIC CHIP 0.22uF	25V
C326	1-135-201-11	TANTALUM CHIP 10uF 20%	4V
C327	1-115-156-11	CERAMIC CHIP 1uF	10V
C332	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C333	1-163-035-00	CERAMIC CHIP 0.047uF	50V
C352	1-104-847-11	TANTAL. CHIP 22uF 20%	4V (FX425)
C353	1-164-005-11	CERAMIC CHIP 0.47uF	25V (FX425)
C601	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C602	1-164-361-11	CERAMIC CHIP 0.047uF	16V
C603	1-164-505-11	CERAMIC CHIP 2.2uF	16V
< FILTER >			
CF1	1-760-345-21	FILTER, CERAMIC	
CF2	1-567-097-61	FILTER, CERAMIC	
< CONNECTOR >			
CN301	1-569-252-21	HOUSING, CONNECTOR (FPC) 5P	
* CN302	1-764-856-12	HOUSING, CONNECTOR 17P	
< COMPOSITION CIRCUIT BLOCK >			
CP1	1-236-711-21	FILTER, BAND PASS (EXCEPT EE)	
CP1	1-239-813-21	FILTER, BAND PASS (EE)	
< TRIMMER >			
CT1	1-141-327-11	CAP, VAR, TRIMMER (CHIP TYPE)	
< DIODE >			
D1	8-719-049-75	DIODE KV1520TL00	
D2	8-719-002-81	DIODE 1T363	
D3	8-719-002-81	DIODE 1T363	
D301	8-719-975-40	DIODE RB411D	
D302	8-719-914-43	DIODE DAN202K	
D303	8-719-914-43	DIODE DAN202K	
D304	8-719-914-43	DIODE DAN202K	
D305	8-719-977-03	DIODE DTZ5.6B	
< IC >			
IC1	8-759-230-39	IC TA8122AF	
IC301	8-759-285-29	IC LA4582CM-TLM	
IC351	8-759-701-07	IC NJM2063AM (FX425)	
IC601	8-759-334-24	IC MM1038CFF	

MAIN

Ref. No.	Part No.	Description	Remark
		< JACK >	
J301	1-565-287-11	JACK (○)	
J302	1-750-061-11	JACK,DC (POLARITY UNIFIED TYPE)(DC IN 3V)	
		< JUMPER RESISTOR >	
JR4	1-216-295-91	CONDUCTOR, CHIP(2012)(EXCEPT US,CND)	
JR5	1-216-864-11	METAL CHIP 0 5% 1/16W (FX421,FX423)	
JR6	1-216-864-11	METAL CHIP 0 5% 1/16W (FX421,FX423)	
JR8	1-216-296-91	CONDUCTOR, CHIP(3216)	
JR9	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR11	1-216-295-91	CONDUCTOR, CHIP(2012)	
JR12	1-216-864-11	CONDUCTOR, CHIP(1608)(US,CND)	
		< COIL >	
L1	1-501-763-11	ANTENNA, FERRITE-ROD (MW)	
L2	1-411-237-11	COIL (FM RF) (EXCEPT EE)	
L2	1-409-754-11	COIL (WITH CORE) (EE)	
L3	1-409-988-11	COIL (WITH CORE) (EXCEPT EE)	
L3	1-409-753-11	COIL (WITH CORE) (EE)	
L4	1-411-238-11	COIL (AM OSC)	
L101	1-500-245-11	METAL CHIP 1K	
L201	1-500-245-11	METAL CHIP 1K	
L301	1-500-245-11	METAL CHIP 1K	
L302	1-412-006-31	INDUCTOR CHIP 10uH	
		< TRANSISTOR >	
Q1	8-729-102-07	TRANSISTOR 2SC2223-F13	
Q2	8-729-402-13	TRANSISTOR XN1501	
Q3	8-729-403-17	TRANSISTOR XN1215 (FX425)	
Q4	8-729-016-74	TRANSISTOR DTC115GK-T146 (US,CND)	
Q301	8-729-216-22	TRANSISTOR 2SA1162-G	
Q302	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q303	8-729-141-48	TRANSISTOR 2SB624-BV345	
Q304	8-729-027-46	TRANSISTOR DTC114YKA-T146	
Q305	8-729-402-13	TRANSISTOR XN1501	
Q306	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q307	8-729-403-17	TRANSISTOR XN1215 (FX421,FX423:US,CND)	
Q307	8-729-022-66	TRANSISTOR XN1210-TX (FX423:AEP,UK,IT,E,EE,FX425)	
Q308	8-729-403-17	TRANSISTOR XN1215	
Q601	8-729-900-53	TRANSISTOR DTC114EK	
		< RESISTOR >	
R1	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R2	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R3	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R4	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R5	1-216-851-11	METAL CHIP 330K 5% 1/16W	
R7	1-216-851-11	METAL CHIP 330K 5% 1/16W	

Ref. No.	Part No.	Description	Remark
R8	1-216-097-91	METAL GLAZE 100K 5% 1/10W	
R9	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R10	1-216-001-00	METAL CHIP 10 5% 1/10W	
R11	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R12	1-216-815-11	METAL CHIP 330 5% 1/16W	
R13	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R14	1-216-837-11	METAL CHIP 22K 5% 1/16W (FX421,FX423)	
R14	1-216-831-11	METAL CHIP 6.8K 5% 1/16W (FX425:US)	
R14	1-216-829-11	METAL CHIP 4.7K 5% 1/16W (FX425:AEP,UK,IT,E)	
R15	1-216-837-11	METAL CHIP 22K 5% 1/16W (FX421,FX423)	
R15	1-216-831-11	METAL CHIP 6.8K 5% 1/16W (FX425:US)	
R15	1-216-829-11	METAL CHIP 4.7K 5% 1/16W (FX425:AEP,UK,IT,E)	
R16	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R17	1-216-847-11	METAL CHIP 150K 5% 1/16W	
R18	1-216-001-00	METAL CHIP 10 5% 1/10W	
R19	1-216-830-11	METAL CHIP 5.6K 5% 1/16W (EXCEPT EE)	
R19	1-216-845-11	METAL CHIP 100K 5% 1/16W (EE)	
R20	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R21	1-216-815-11	METAL CHIP 330 5% 1/16W (EXCEPT US,CND)	
R22	1-216-821-11	METAL CHIP 1K 5% 1/16W (US,CND)	
R101	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R102	1-216-083-00	METAL CHIP 27K 5% 1/10W	
R103	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R104	1-216-835-11	METAL CHIP 15K 5% 1/16W	
R105	1-216-855-11	METAL CHIP 680K 5% 1/16W	
R106	1-216-817-11	METAL CHIP 470 5% 1/16W (FX421,FX423)	
R106	1-220-373-11	METAL GLAZE 620 1/16W(FX425)	
R107	1-216-864-11	METAL CHIP 0 5% 1/16W (FX421,FX423:US,CND)	
R107	1-216-796-11	METAL GLAZE 8.2 5% 1/16W (FX423:AEP,UK,IT,E,EE,FX425:US)	
R107	1-216-793-11	METAL GLAZE 4.7 5% 1/16W (FX425:AEP,UK,IT,E)	
R108	1-216-849-11	METAL CHIP 220K 5% 1/16W (FX421,FX423:US,CND)	
R108	1-216-839-11	METAL CHIP 33K 5% 1/16W (FX423:AEP,UK,IT,E,EE,FX425:AEP,UK,IT,E)	
R108	1-216-846-11	METAL CHIP 120K 5% 1/16W (FX425:US)	
R151	1-218-448-11	METAL GLAZE 430K 5% 1/16W (FX425)	
R152	1-216-841-11	METAL CHIP 47K 5% 1/16W (FX425)	

Ref.No.	Part No.	Description	Remark		Ref. No.	Part No.	Description	Remark	
R153	1-216-827-11	METAL CHIP	3.3K	5%	1/16W (FX425)	R351	1-216-864-11	METAL CHIP	0 5% 1/16W (FX425)
R154	1-216-830-11	METAL CHIP	5.6K	5%	1/16W (FX425)	R352	1-216-073-00	METAL CHIP	10K 5% 1/10W (FX425)
R201	1-216-838-11	METAL CHIP	27K	5%	1/16W	R601	1-217-905-11	METAL GLAZE	1.5 5% 1/10W
R202	1-216-838-11	METAL CHIP	27K	5%	1/16W	R602	1-217-907-11	METAL GLAZE	1.8 5% 1/10W
R203	1-216-835-11	METAL CHIP	15K	5%	1/16W	R603	1-216-818-11	METAL CHIP	560 5% 1/16W
R204	1-216-077-00	METAL CHIP	15K	5%	1/10W	< VARIABLE RESISTOR >			
R205	1-216-117-00	METAL CHIP	680K	5%	1/10W	RV301	1-223-609-21	RES, VAR, CARBON 10K/10K (▲VOL)	
R206	1-216-817-11	METAL CHIP	470	5%	1/16W (FX421,FX423)	RV601	1-223-582-11	RES, ADJ, CARBON 470	
R206	1-220-373-11	METAL GLAZE	620		1/16W(FX425)	< SWITCH >			
R207	1-216-295-91	CONDUCTOR, CHIP(2012)			(FX421,FX423:US,CND)	S301	1-571-986-11	SWITCH, LEAF (TAPE POWER SWITCH)	
R207	1-216-313-00	METAL CHIP	8.2	5%	1/10W (FX423:AEP,UK,IT,E,EE,FX425:US)	S302	1-571-986-31	SWITCH, LEAF (FWD/REV SWITCH)	
R207	1-216-308-00	METAL CHIP	4.7	5%	1/10W (FX425:AEP,UK,IT,E)	S303	1-692-298-11	SWITCH, SLIDE	
R208	1-216-849-11	METAL CHIP	220K	5%	1/16W (FX421,FX423:US,CND)			(FM SENS)(FX421,FX423:US,CND)	
								(FM MODE)(FX423:AEP,UK,IT,E,EE)	
								(DOLBY NR)(FX425)	
R208	1-216-839-11	METAL CHIP	33K	5%	1/16W (FX423:AEP,UK,IT,E,EE,FX425:AEP,UK,IT,E)	S304	1-692-298-11	SWITCH, SLIDE (TAPE)	
R208	1-216-846-11	METAL CHIP	120K	5%	1/16W (FX425:US)	S305	1-692-298-11	SWITCH, SLIDE (AVLS)	
R251	1-218-448-11	METAL GLAZE	430K	5%	1/16W (FX425)	< TRANSFORMER >			
R252	1-216-089-91	METAL GLAZE	47K	5%	1/10W (FX425)	T1	1-406-694-11	COIL, AM IFT	
R253	1-216-827-11	METAL CHIP	3.3K	5%	1/16W (FX425)	T301	1-426-851-11	TRANSFORMER, DC-DC CONVERTER (EXCEPT EE)	
						T301	1-426-917-11	TRANSFORMER, DC-DC CONVERTER (EE)	
						< THERMISTOR >			
R254	1-216-830-11	METAL CHIP	5.6K	5%	1/16W (FX425)	TH601	1-809-279-11	THERMISTOR, POSITIVE	
R301	1-216-837-11	METAL CHIP	22K	5%	1/16W	TH602	1-810-773-11	THERMISTOR, POSITIVE	
R302	1-216-821-11	METAL CHIP	1K	5%	1/16W	< VIBRATOR >			
R303	1-216-837-11	METAL CHIP	22K	5%	1/16W	X1	1-577-091-21	OSCILLATOR, CERAMIC (19KHz)	
R304	1-216-823-11	METAL CHIP	1.5K	5%	1/16W	X2	1-567-097-61	FILTER, CERAMIC (10.7 MHz)	
R305	1-216-833-11	METAL CHIP	10K	5%	1/16W	*****			
R306	1-216-821-11	METAL CHIP	1K	5%	1/16W				
R308	1-216-097-91	METAL GLAZE	100K	5%	1/10W				
R309	1-216-029-00	METAL CHIP	150	5%	1/10W (EXCEPT EE)				
R309	1-216-015-00	METAL CHIP	39	5%	1/10W (EE)				
R310	1-216-821-11	METAL CHIP	1K	5%	1/16W				
R311	1-216-077-00	METAL CHIP	15K	5%	1/10W				
R312	1-216-845-11	METAL CHIP	100K	5%	1/16W				
R313	1-218-448-11	METAL GLAZE	430K	5%	1/16W				
R314	1-216-837-11	METAL CHIP	22K	5%	1/16W				
R315	1-216-821-11	METAL CHIP	1K	5%	1/16W				
R330	1-216-801-11	METAL CHIP	22	5%	1/16W (FX421,FX423:US,CND)				
R330	1-216-811-11	METAL CHIP	150	5%	1/16W (FX423:AEP,UK,IT,E,EE,FX425:US)				
R330	1-216-809-11	METAL CHIP	100	5%	1/16W (FX425:AEP,UK,IT,E)				

WM-FX421/FX423/FX425

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS *****	
HP901	1-543-705-11	HEAD, MAGNETIC (PLAYBACK)	
LCD401	1-801-176-11	DISPLAY PANEL, LIQUID CRYSTAL	
M601	1-698-353-11	MOTOR, DC (REEL/CAPSTAN)	

		ACCESSORIES & PACKING MATERIALS *****	
	1-504-228-11	HEADPHONE (MDR-013) (FX421:US,CND,AEP/FX423:US,CND)	
	1-504-521-11	HEADPHONE (MDR-015)(FX425:US)	
	8-953-130-90	HEADPHONE MDR-E801//K SET (FX423:AEP,UK,E,IT,EE/FX425:AEP,UK,E,IT,EE)	
	3-346-518-01	CLIP, BELT	
	3-810-567-11	MANUAL, INSTRUCTION(ENGLISH)(US)	
	3-810-567-21	MANUAL, INSTRUCTION(ENGLISH,FRENCH)(CND)	
	3-810-567-31	MANUAL, INSTRUCTION (ENGLISH,FRENCH,GERMAN,SPANISH)(AEP,UK,IT)	
	3-810-567-41	MANUAL, INSTRUCTION (DUTCH,SWEDISH,ITALIAN,PORTUGUESE) (AEP,UK,IT)	
	3-810-567-51	MANUAL, INSTRUCTION (ENGLISH,POLISH, HUNGARIAN, RUSSIAN) (FX423:EE)	
	3-810-567-61	MANUAL, INSTRUCTION (ENGLISH,SPANISH,CHINESE,KOREAN)(E)	
	3-810-567-71	MANUAL, INSTRUCTION (ENGLISH,SPANISH,CHINESE,KOREAN)(E)	
	3-810-567-81	MANUAL,INSTRUCTION (ENGLISH,FRENCH, GERMAN,SPANISH) (FX421:AEP)	
	3-810-567-91	MANUAL,INSTRUCTION (ENGLISH,SWEDISH,ITALIAN,PORTUGUESE) (FX421:AEP)	
*	3-910-312-01	CUSHION (AEP,E,IT,EE)	
*	3-932-256-01	INDIVIDUAL CARTON (FX423:AEP,UK,IT,EE,E)	
*	3-932-257-01	INDIVIDUAL CARTON (FX423:E)	
*	3-932-260-01	INDIVIDUAL CARTON (FX425:AEP,UK,IT,E)	
*	3-932-261-01	INDIVIDUAL CARTON (FX425:E)	

WM-FX421/FX423/FX425

SONY

SERVICE MANUAL

SUPPLEMENT-1

File this supplement with the service manual.

Subject : Addition of WM-FX421 E model and Chinese model

(ENG-98003)

US Model

WM-FX421/FX423/FX425

Canadian Model

WM-FX421/FX423

AEP Model

WM-FX421/FX423/FX425

UK Model

WM-FX423/FX425

E Model

WM-FX421/FX423/FX425

Chinese Model

WM-FX421

E model and Chinese model are added to the WM-FX421.
This supplement-1 describes only differences from the WM-FX421.
Refer to the service manual for WM-FX421/FX423/FX425 (9-960-576-12) for other information.

• EXPLODED VIEWS

Page	WM-FX421 (US, Canadian)				WM-FX421 (E, Chinese)		
	Ref. No.	Part No.	Description	Remark	Part No.	Description	Remark
23	10	A-3016-767-A	MAIN BOARD, COMPLETE		A-3016-993-A	MAIN BOARD, COMPLETE	
	12	3-933-077-01	CABINET (FRONT) (51)		3-933-077-71	CABINET (FRONT) (51)	
	14	A-3016-768-A	DISPLAY BOARD, COMPLETE		A-3016-769-A	DISPLAY BOARD, COMPLETE	

• ELECTRICAL PARTS LIST

Page	WM-FX421 (US, Canadian)						WM-FX421 (E, Chinese)					
	Ref. No.	Part No.	Description	Remark			Part No.	Description	Remark			
25		A-3016-768-A	DISPLAY BOARD, COMPLETE *****				A-3016-769-A	DISPLAY BOARD, COMPLETE *****				
26		A-3016-767-A	MAIN BOARD, COMPLETE *****				A-3016-993-A	MAIN BOARD, COMPLETE *****				
	C12	1-162-953-11	CERAMIC CHIP 100PF	5%	50V		1-164-227-11	CERAMIC CHIP 0.022uF	10%	25V		
	C32	1-164-245-11	CERAMIC CHIP 0.015uF	10%	25V		1-162-970-11	CERAMIC CHIP 0.01uF	10%	25V		
	C33	1-164-245-11	CERAMIC CHIP 0.015uF	10%	25V		1-162-970-11	CERAMIC CHIP 0.01uF	10%	25V		
	C40	1-162-966-11	CERAMIC CHIP 0.0022uF	10%	50V		1-162-953-11	CERAMIC CHIP 100PF	5%	50V		
28	Q307	8-729-403-17	TRANSISTOR XN1215				8-729-022-66	TRANSISTOR XN1210-TX				
	R107	1-216-864-11	METAL CHIP 0	5%	1/16W		1-216-796-11	METAL GLAZE 8.2	5%	1/16W		
	R108	1-216-849-11	METAL CHIP 220K	5%	1/16W		1-216-839-11	METAL CHIP 33K	5%	1/16W		
29	R207	1-216-295-91	CONDUCTOR, CHIP (2012)				1-216-313-00	METAL CHIP 8.2	5%	1/10W		
	R208	1-216-849-11	METAL CHIP 220K	5%	1/16W		1-216-839-11	METAL CHIP 33K	5%	1/16W		
	R330	1-216-801-11	METAL CHIP 22	5%	1/16W		1-216-811-11	METAL CHIP 150	5%	1/16W		

• ACCESSORIES & PACKING MATERIALS

Page	WM-FX421 (US, Canadian)				WM-FX421 (E, Chinese)		
30	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
		1-504-228-11	HEADPHONE (MDR-013)		8-953-130-90	HEADPHONE MDR-E801//K SET	
		3-810-567-11	MANUAL, INSTRUCTION (ENGLISH) (US)		3-810-567-61	MANUAL, INSTRUCTION (ENGLISH,SPANISH, CHINESE,KOREAN) (E)	
		3-810-567-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (CND)		3-810-953-31	MANUAL, INSTRUCTION (ENGLISH,CHINESE) (Chinese)	